

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A vision prosthesis comprising:

an optical element having a characteristic function associated with refraction
therethrough, ~~the characteristic function being selected to reduce aberration in an eye when the optical element is implanted at a location therein; and~~

a memory element, the memory element storing wavefront data selected to control an index of refraction profile of the optical element to selectively modify the characteristic function of the optical element to reduce aberration in an eye when the optical element is implanted at a location therein.
2. – 7. (Canceled)
8. (Original) The vision prosthesis of claim 1 further comprising:

a range-finder for generating, from a stimulus, an estimate of a distance to an object-of-regard;

an actuator in communication with the optical element for providing a signal that controls the focusing power thereof; and

a controller coupled to the rangefinder and to the actuator, for causing the actuator to generate the signal based on the estimate.

9. (Currently Amended) The vision prosthesis of claim [[2]] 1 further comprising:
an actuator in communication with the optical element for providing a signal that controls
the characteristic function thereof; and
a controller coupled to the actuator for causing the actuator to generate the signal based
on wavefront data stored in [[a]] the memory element ~~of the controller~~.
10. (Original) The vision prosthesis of claim 9 wherein the signal is a parallel signal
carried over a plurality of signal lines addressing a corresponding plurality of electrodes on the
actuator.
11. (Original) The vision prosthesis of claim 9 wherein the characteristic function of the
optical element changes in response to the signal by changing an index of refraction of material
within the optical element at a plurality of locations.
12. (Canceled)
13. (Original) The vision prosthesis of claim 9 further comprising:
a range-finder coupled to the controller for generating, from a stimulus, an estimate of a
distance to an object-of-regard;
wherein the signal is based on the estimate, and focusing power of the optical element
changes in response to the estimate.
14. (Original) The vision prosthesis of claim 13 wherein the characteristic function of the
optical element changes in response to the estimate.

15. (Original) The vision prosthesis of claim 1 wherein the location in the eye is selected from the group consisting of:

the anterior chamber;
the posterior chamber;
the lens-bag; and
the cornea.

16. (Original) The vision prosthesis of claim 1 wherein the optical element is adapted for implantation in a phakic human patient.

17. (Original) The vision prosthesis of claim 1 wherein the optical element is adapted for implantation in an aphakic human patient.

18. (Withdrawn) A method comprising:

implanting ~~an optical element~~ the optical element and memory element of the vision prosthesis of claim 1 into ~~[[an]]~~ the eye;

measuring aberration in the eye when the optical element is implanted in the eye;

determining the wavefront data based on the measured aberration; and

programming the wavefront data into ~~[[a]]~~ the memory device ~~in electrical communication with the optical element;~~

~~wherein a characteristic function associated with refraction through the optical element is designed to reduce aberration in the eye after the memory device is programmed.~~

19. (Canceled)